



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,351	09/22/2003	Norbertus Josephus Martinus Van De Nieuwelaar	081468-0305843	4924
909	7590	12/07/2004	EXAMINER	
PILLSBURY WINTHROP, LLP			MATHEWS, ALAN A	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
			2851	

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,351

Applicant(s)

VAN DE NIEUWELAAR,
NORBERTUS JOSEPHUS M

Examiner

Alan A. Mathews

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 3-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayashi (U. S. Patent No. 6,426,790). Figures 1 and 2 and column 7, lines 13-25, disclose a first substrate table WS1 for holding a first substrate and a second substrate table WS2 for holding a second substrate. Figure 2 and column 10, lines 21-28, discloses a first station at which measurements may be performed and a second station below the projection system PL at which substrates are exposed. Column 9, lines 5-50, disclose an interferometer system 9, with interferometers 16 and 18 and other interferometers not shown for measuring displacements of the first and substrate substrata tables in the first and second stations. Column 7, lines 50-62 disclose that the two wafer stages WS1 and WS2 are independently movable in the two-dimensional directions. The stage drive system is controlled by a control apparatus 38. Column 17, lines 18-27, disclose “As the drive mechanism for the respective stages WS1 and WS2, and

Art Unit: 2851

RST, a **planar motor** may be used wherein a magnetic unit in which magnets are arranged two-dimensionally (permanent magnets) and an armature unit in which coils are arranged two-dimensionally are made to face each other, and respective stages WS1, WS2 and RST are driven by an electromagnetic force". The control apparatus 38 would have the computer program (including a program code) to instruct the lithographic projection apparatus to perform the recited methods. Control apparatus would also calculate and store relative locations of the substrate tables. With respect to claims 14-17, as specifically pointed out in the previous office action, claims 14-17 are product-by-process claims, with the device being the product. MPEP 2113 states **that the determination of patentability of a product-by-process claim is based on the product itself. The patentability of a product does not depend on its method of production.** The device produced in Hayashi appears to be the same product as produced by claims 14-17 of the instant application. The Examiner can find no difference in the device produced in Hayashi than the device or wafer produced by claims 14-17 of the instant application.

3. Claims 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by either the European patent document EP 1041357 A1 (cited on Applicant's PTO-1449), or Kwan et al. (U. S. Patent Application Publication No. 2001/0004150 A1, cited on Applicant's PTO-1449), or Lin (U. S. Patent No. 5,715,064). As specifically pointed out in the previous office action, claims 14-17 are product-by-process claims, with the device being the product. MPEP 2113 states **that the determination of patentability of a product-by-process claim is based on the product itself. The patentability of a product does not depend on its method of production.** The device produced in either the European patent document EP 1041357 A1, or Kwan et al., or Lin

Art Unit: 2851

appears to be the same product as produced by claims 14-17 of the instant application. The Examiner can find no difference in the device produced in either the European patent document EP 1041357 A1, or Kwan et al., or Lin than the device or wafer produced by claims 14-17 of the instant application. It is further noted that MPEP 2113 gives an example where the process of making the product was allowed, but the product-by-process was rejected.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 3-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the European patent document EP 1041357 A1 (cited on Applicant's PTO-1449) in view of Hayashi (U. S. Patent No. 6,426,790). Figure 4 of the European patent document EP 1041357 A1 discloses a substrate table WST at a measuring station, which would be a first station (see column 19, lines 39-57), and column 23, lines 35-53). Figure 2 discloses an exposure region 12, which would be a second station at which the substrate may be exposed. Figure 5 discloses a radiation system with an exposure station and a measuring station (see column 23, lines 35-55). Displacement measuring system includes interferometers 87X1, 87X2, 87Y1, 87Y2, 87Y3, 87Y4, and 87Y5 (see figure 7). A substrate transfer device includes 93A, 93B, 93C, and 93D. Figure 5 further discloses a projection system including elements 56, 60, 66, 68, and PL1 which

Art Unit: 2851

projections a patterning beam from reticle R1 onto a substrate at the second station. With respect to claim 4, figure 5 discloses an alignment system 88A and 88B. Element 38 in figure 5 is a controller, which would have the necessary storage and would have a computer program to execute control of the lithographic projection apparatus. Thus, C discloses the invention except for specifically stating that a planar motor independently transfers the first and second substrate between the first and second stations. Hayashi discloses in column 7, lines 50-62, that the two wafer stages WS1 and WS2 are independently movable in the two-dimensional directions. Column 17, lines 18-27, disclose "As the drive mechanism for the respective stages WS1 and WS2, and RST, a **planar motor** may be used wherein a magnetic unit in which magnets are arranged two-dimensionally (permanent magnets) and an armature unit in which coils are arranged two-dimensionally are made to face each other, and respective stages WS1, WS2 and RST are drive by an electromagnetic force". It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the European patent document EP 1041357 A1 with a planar motor to independently transfer the first and second substrate tables between the first and the second stations in view of Hayashi for the purpose of easier transfer of the substrate tables without the need for guides and thus easier construction of the apparatus.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

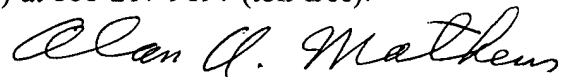
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan A. Mathews whose telephone number is (571) 272-2123. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alan A. Mathews
Primary Examiner
Art Unit 2851

AM